Whole Health for Mental Health
Day 2 Afternoon

- Finding Peace and Ease, Part 2: Trauma
- Mindful Awareness: Just Like Me
- Finding Vitality and Wholeness, Part 1: Suicide Prevention
- Finding Vitality and Wholeness, Part 2: Meaning and Purpose
- Implementation, Part 3: The Next Level

17. Finding Peace and Ease II: Trauma
Whole Health for Mental Health
day 2 afternoon

**Trauma**

No good scientific definitions to distinguish "trauma" from "stress"

Working components:
- An event
- Perceived as noxious by the organism
- Creates distress
- May have specific effects and specific responses

**Possible Trauma Outcomes**

- No adverse outcome
- Growth
- Distress (failure of complete resistance)
  - Posttraumatic Stress Disorder, depression, anxiety
  - Other disorders of emotion and cognition
  - Other medical disorders
  - Biological changes
  - Psychological and behavioral changes

**Back to Tony: Tony’s Trauma**

- During therapy, Tony reveals
  - His father was physically abusive to him and his mother
  - His father was ultimately incarcerated
  - All his life, people have assumed he “is Middle Eastern” which is a source of anxiety
Adverse Childhood Experiences

(ACE) Study, 1998

- 13,494 adults in a large HMO
- 7 categories of childhood exposures
  - Abuse (psychological, physical, sexual)
  - Violence against mother
  - Alcoholism or drug abuse
  - Mental illness in family (depression or suicide attempts)
  - Household members ever imprisoned
- Looked at how number of categories tied to risky behaviors, health status, disease


Adverse Childhood Experiences

- ACE effects are cumulative
- >4 categories (~13% of people):
  - Increases the number of risk factors for the leading causes of death
  - Increases risk of mental disorders 4 to 12 times
    - 12x the suicide attempts, drug risks, depression
    - 10x the risk of using injectable street drugs
    - 7x the risk of alcoholism
    - 2x smoking risk
    - 1.4-1.6x increase in physical inactivity/obesity

https://www.cdc.gov/violenceprevention/childabuseandneglect/acesstudy/about.html

Adverse Childhood Experiences

- 64% of adults have at least one
  - 87% of this group has 2 or more
  - Doesn’t matter which one(s)
- The more you have, the higher your risk of chronic illness, mental illness, violence
- People with 6/10 ACEs in more recent studies, have 20 years less life expectancy

https://acesstoohigh.com/aces-101/
Adverse Childhood Experiences

[Image: https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/about.html]

Trauma-Informed Care (TIC)

[Image: socialwork.career]

ACE's: What Else Helps?

Post-Traumatic Growth

[Image: intentioninspired.com]
• 50% of all Veterans and 72% with PTSD reported at least moderate post-traumatic growth
• Those who did had better overall health
• Social connectedness, purpose in life, and religiosity were correlated.

Tsai et al, Psychological Medicine, 2015;45:165–79.

Forgiveness

If Mind is wounded
Forgiveness has healing power.

If anger is disease
Forgiveness is the medicine.

If Resentment is darkness
Forgiveness is sunlight.

• Has many health benefits
• Is never about condoning a behavior
• Is about releasing the past
• Is a process
• Takes time
• Requires partnership

Rindfleisch, “Forgiveness” Integrative Medicine, 3rd ed, 2017, Saunders
Posttraumatic Stress Disorder (PTSD) Requires Whole Health Approach

More on Tony’s Trauma

- He notes feeling challenged by a coworker
  - A gay man who talks to him a lot
  - Puts him on guard
  - Sometimes he thinks he sees or hears the guy during non-work time
- And... after several visits, he tells you he was a victim of military sexual trauma during combat training

1 in 4 female and 1 in 100 male Veterans report experiencing MST

Mind and Body are One

Evidence is Starting to Give Body the Upper Hand
Whole Health for Mental Health
Day 2 Afternoon

Polyvagal Theory

Posttraumatic Stress Disorder
A complex illness that affects the whole body
- Central pre-frontal and related neurocircuits
- Hypothalamic-Pituitary-Adrenal axis
- Autonomic Nervous System
- Immunity and Inflammation
- All under control of gene-environment interactions
- Causing "physical" and "psychological" symptoms

Outcomes of Adverse Experiences:

Hypothalamic-pituitary-adrenal (HPA) axis dysfunction
- Serum/urinary cortisol output
  - Some cortisol studies are conflicting

Autonomic nervous system (ANS) dysfunction
- Phasic activation of sympathetic nervous system with trauma-related stimuli
- Urinary output of adrenaline
  - Some studies are contradictory
Trauma and Inflammation

**The Body is in Fight Mode, Preparing for Harm!!**

- CNS, HPA axis, and ANS dysfunction seen in PTSD is compatible with inflammatory dis-inhibition
  - Increased concentration of inflammatory mediators
    - C-reactive protein (CRP)
    - interleukins 1, 1β, 6 (IL-1, IL-1β, and IL-6), and tumor necrosis factor-alpha (TNFα)1-4
  - Chronicity of PTSD may be associated with alterations in inflammatory markers5
  - These processes accelerate atherosclerosis,6 encourage insulin resistance,7 and alter pain responsiveness8


Is This a Mental Disorder?

**Endocrine and Inflammatory Dysregulations in PTSD**


Gene Expression Levels in Combat Veterans

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PTSD and Medical Disorders

Physical Illness Tied to PTSD
A study of the medical records of 4,416 veterans of the wars in Iraq and Afghanistan showed significant differences in rates of physical diseases in those with and without PTSD.

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>With PTSD (%)</th>
<th>Without PTSD (%)</th>
<th>Odds Ratio</th>
<th>Time between PTSD + disease diagnosis (mean)</th>
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<tbody>
<tr>
<td>Endocrine/metabolic</td>
<td>21.1</td>
<td>20.1</td>
<td>0.98</td>
<td>6.7</td>
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<tr>
<td>Nervous/sensory</td>
<td>43.8</td>
<td>27.3</td>
<td>1.98**</td>
<td>2.8</td>
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<tr>
<td>Circulatory</td>
<td>15.9</td>
<td>12.2</td>
<td>1.29*</td>
<td>4.9</td>
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<tr>
<td>Hypertensive</td>
<td>9.2</td>
<td>6.6</td>
<td>1.39*</td>
<td>4.5</td>
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<tr>
<td>Respiratory</td>
<td>25.3</td>
<td>20.4</td>
<td>1.18</td>
<td>4.9</td>
</tr>
<tr>
<td>Digestive</td>
<td>35.5</td>
<td>21.3</td>
<td>1.34**</td>
<td>2.9</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>57.9</td>
<td>43.0</td>
<td>1.84**</td>
<td>2.6</td>
</tr>
<tr>
<td>Sign/symptomatic</td>
<td>49.9</td>
<td>33.9</td>
<td>1.78**</td>
<td>6.8</td>
</tr>
</tbody>
</table>

Source: Judith Anderson, M.D. et al., Psychosomatic Medicine, June 2010

Whole Person PTSD Treatment at TRVAMC

<table>
<thead>
<tr>
<th></th>
<th>Self-Care</th>
<th>Professional Care</th>
<th>OIH Care</th>
<th>Community Care</th>
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<tr>
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<td>Cognitive Therapies</td>
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<td>Movement</td>
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<td>Medicinals</td>
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<td>Relaxation</td>
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<tr>
<td>Exercise</td>
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<tr>
<td>Yoga</td>
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</tbody>
</table>

PTSD: Self-Care Circles

- Work with moral injury – PTSD as a "soul wound"
- Forgiveness therapy may help
- Less isolation helps
- Connecting with other Veterans with similar concerns helps
- Involved loved ones as able
- Treat unresolved grief
- Avoid substance use
- Relaxation practices
- Exercise has helped in several small studies – 40 minute sessions a few times/week usually studied
- Move if in a high crime area
- Look for triggers and work to manage
- Explore post-traumatic growth
- Volunteer
- Eat anti-inflammatory!!
Effective Professional Care for PTSD

- **Pharmacological**
  - SSRIs: paroxetine best in meta-analyses
  - Prazosin for nightmares and other PTSD symptoms
  - Augmenting: TCAs, SNRIs, somnolents

- **Non-pharmacological**
  - CBT: Prolonged Exposure (PE), Cognitive Processing, iCBT
  - Eye Movement Desensitization and Reprogramming (EMDR)

- **Probably effective: replication needed**
  - Acupuncture
  - Somatic Experiencing (SE)
  - Imagery Rehearsal Therapy (IRT)
  - Stellate Ganglion Block
  - Mantram Repetition
  - Yoga
  - Mindfulness (Either MBSR or Meditation)

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Effectiveness of PE in the VA

![Graph showing Effectiveness of PE in the VA](image)

Effekhari et al., 2013

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CPT Compared to TAU in Veterans

![Graph showing CPT Compared to TAU in Veterans](image)

Monson et al. (2006). JCCP
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**Peace and Ease**

- Imagery techniques  
  - Guided imagery  
  - Imagery Rehearsal Therapy  
  - Imagery combined with other techniques

---

**IRT For Nightmares and PTSD**

- Nightmares  
  - Nights per week: 3.9 to 1.3 (d = 1.24)  
  - Nightmares per week: 6.4 to 2.4 (d = 0.85)  

- PTSD  
  - CAPS score: 81.9 to 49.6 (d = 1.53)  
  - PSS-SR score: 28.3 to 17.2 (d = 1.00)  

- Other effects  
  - Sleep: moderate effects (d = 0.67)  
  - Depression: moderate effects (d = 0.57, 0.33 controls – NS)  
  - Anxiety: moderate effects (d = 0.39)


---

**Acupuncture and I-CBT for PTSD: ITT**

[Graph showing results of acupuncture and I-CBT for PTSD]

Stellate Ganglion Block for PTSD

PSS-SR scores for responders and nonresponders at various times following SGB

PSS-SR Responders

PSS-SR Non-Responders

Stellate Ganglion Block for PTSD

Alkire et al, LBVA

Dietary Supplements

- Plant-based medicine for anxiety and PTSD – limited research for most
  - Ashwagandha
  - Brahmi
  - Bitter Orange
  - Chamomile
  - Echinacea
  - Galphimia
  - Lemon Balm
  - Cannabanoids
  - Psilocybin and hallucinogens

PTSD: Mindfulness interventions

2017 review of 10 trials, n=643:

- Low to moderate evidence of benefit for MBSR, mantram meditation, yoga
- “Appears to be effective”
- More studies needed (of course)

2016 review:

- Mindfulness-based interventions a good adjunct to standard care


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EMDR

- 2018 review: 11 studies, n=547 found that EMDR was superior to CBT at reducing post-traumatic symptoms
- But 4 studies didn’t show difference 3 months out

Khan et al, Cureus, 2018; 10(9):e3250.

Emotional Freedom Technique

- Exposure and cognitive processing, combined with acupoints
- 2017 review of 7 trials
  - 4-10 sessions, vs no care or usual care
  - Large effect size (d=2.96)
  - Comparable to CBT, EMDR


PTSD: Other Professional Care Options

- Biofeedback and neurofeedback: modest success
- Writing helps: 2013 meta-analysis
- Need more data for hypnotherapy
- Mantra
- Repetition useful
- Spirituality shown helpful
- Collaborative treatment planning and education help
- Conjoint CBT showing promise
- Small healing touch study in active duty found benefit
- Acupuncture rec'd in clinical practice guideline
- Yoga – not clear, tai chi – not clear
- Supplements: • Research limited

Whole Health Library PTSD Overview: https://wholehealth.wisc.edu/overviews/posttraumatic-stress-disorder-ppt/
Video: What this all means...

The Warrior Within
https://vimeo.com/122663858

Thank You!

18. Mindful Awareness:
   Just Like Me
Whole Health for Mental Health
Day 2 Afternoon

19. Finding Vitality and Wholeness I: Suicide Prevention

Aspects of Mental Health

• Thinking and Cognition
• Emotions
• Behaviors and Choices
• Peace and Ease
  • Vitality and Wholeness

The purpose of life is not to be happy. It is to be useful, to be honorable, to be compassionate, to have it make some difference that you have lived and lived well.

- Ralph Waldo Emerson

Suicide is preventable.

Whole Health can help.
Important Figures

20 Veterans die by suicide each day.
123 Americans die by suicide each day.
1-2 Active duty Service members die by suicide each day.

Important Figures

The rate of suicide was 1.8 times higher among male Veterans compared with non-Veteran adult men.
The rate of suicide was 1.4 times higher among male Veterans compared with non-Veteran adult men.

Male Veterans ages: 18–34 experienced the highest rate of suicide.
55 and older had the highest count of suicide.

69% of all Veteran suicide deaths resulted from a firearm injury.

Veteran Suicide Rate and Count Increased from 2005 to 2016

U.S. Veteran Suicide Count: 4.9%
U.S. Veteran Population: 16.7%
U.S. Veteran Suicide Rate: 25.9%
Suicide – the Challenge

6,000 Veteran suicides each year, 2008-16
19 Veterans committed suicide on VA campuses from 10/17-9/18. 7 died in parking lots.
70% of Veterans who died were not cared for by VHA
Rate increased 26% versus 21% in general population
69% from firearms versus 48% for US in general
Average number of Veteran suicide deaths daily is 20
Suicides in women Veterans increased more rapidly, 1.8 times higher than US in general
233 Veterans were stopped from committing suicide on VA Campuses

Part of the Challenge...

“Many people who die by suicide are not known to have a diagnosed mental health condition at the time of death”

https://www.cdc.gov/vitalsigns/suicide/index.html

And Yet...

“Psychological autopsy studies reveal that 90-95% of people who die by suicide have diagnosable mental health problems.”

Data from US Army soldier population

VA National Suicide Data Reports, 2005-2011.
Furthermore...

Over 50% of Veterans engaging in a non-fatal suicide attempt were last seen in primary care prior to that event.


And...

“...Leading researchers have questioned whether treatment of the mental health disorder alone is an effective way to reduce the risk of suicide.

Suicide-specific treatment models may be effective in reducing suicide risk and suicidal behaviors... [As] opposed to focusing on the mental health disorder per se, treatment should target the pain and underlying reasons of why a person considers suicide”


“We did the clinical reminders, we met the measures, but we missed his suffering”
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Suicide Affects Us All

Reflect on a time when suicide affected your life

Tony

• Tony denies active suicidal thoughts
  – Does that mean he doesn’t have them?
• How can we improve his odds of survival?


How do we address prevent handle heal from suicide?
What Veterans say they needed

2014 summary: Interviews with 23 Veterans who had attempted suicide
– Two things would have helped most:
  • More compassion and empathy from care providers
  • Social support


Risk and Protective Factors

Risk
• Prior suicide attempt
• Mental health issues
• Substance abuse
• Access to lethal means
• Sense of burdensomeness
• Recent loss
• Legal or financial challenges
• Relationship issues
• Unemployment

Protective
• Access to mental health care
• Sense of connectedness
• Problem-solving skills
• Sense of spirituality
• Mission or purpose
• Physical health
• Employment
• Social and emotional well-being

Goal: Minimize risk factors and boost protective factors
Risk Factors

- MST tied to increased suicide attempt risk in men (HR 1.69) and women (HR 2.27)
  - Adjusting for comorbidities and other risk factors, 1.19 and 1.36


Trauma and Suicide Risk

- Note the relative contributions of PTSD and childhood traumas
- Not that bottom line (CD-RISC = resilience) shows an effect
- CES is combat exposure


Smoking and Suicide

- Nicotine dependence by itself is linked with onset and progression of suicidal behaviors
  - Even when adjusting for TLE and mental disorders
  - Reduced suicide rate in people with schizophrenia who quit
- Dose response relationship
  - Army: >20 cigs/day = double the suicide risk
  - Veterans: 36% increased risk, adjusting for other diagnoses
  - Tied to onset and progression of suicidal behavior with incoming Army Soldiers
- Why? Dysregulation of serotonin, HPA, Physical health effects, social factors

Protective Factors: Where Whole Health Fits in

- Resilience
- Self-Care
- Professional Care
- Community

The Opposite of Burnout: What is Resilience?

- If there are no ups and downs in your life, it means you are dead

Video: Re-Assembling Life

Veteran Displays Incredible resilience
https://www.youtube.com/watch?v=HIPscuVbZIM
Resilience

- “Resilience-enhancing intervention may have a preventative or prophylactic role against depressive [sic] and suicidal ideation.”

- Resilience: Qualities that enable a person to thrive in the face of adversity
  - Overall prevention of psychological symptoms in adversity
    - Linked to PTSD prevention and recovery (post-traumatic growth)
  - Central serotonergic function
    - Venlafaxine led to score changes in PTSD

Whole Health and Suicide Prevention

Mission, Aspiration, and Purpose
- Exploring them can identify at-risk Veterans and may help identify what matters

Mindful awareness
- Enhances stress management skills and awareness of thought patterns

Self-care
- Fosters resilience and buffers against challenging events that might contribute to suicide risk

Professional care
- Strong therapeutic relationships mean more disclosure, more adherence, and more follow up
- The Whole Health approach is well-suited to working with complex comorbidities that predispose to suicide

Community
- Many resources and organizations can help
- Might reach those who would not seek help otherwise
Family, Friends & Coworkers

- Strong social connections in OEF/OIF Veterans **negate** the effect of PTSD and depression
- Opposite also true
- Do better if good unit cohesion as a soldier
- 10-30% of Americans experience loneliness, with increased risk
- In older people with discordant relationships, 57% higher risk of suicidal ideation

**Brent, Suicide Life-Threatening Beh, 2016; Suppl 1): S39-47.**
**Teo, J Affect Disord, 2018; 230: 42-9.**
**DeBeer, Psychiatry Res, 2014; 216: 357-62.**

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34,901 Male Health Professionals over 24 years


Surroundings and Suicide Risk

- Specific times are higher risk
  - Morning
  - Mondays
  - Spring and early summer
  - Not about amount of daylight though
- Every 1°C increase in temp over ambient = 3% increase in suicide incidence
- Proximity to green spaces lowers risk
  - 18-25% less in quartile with highest access vs lowest

**Galvao, J Affect Disord, 2018; 228: 132-42.**
**Gao et al, SciTotal Env, 2019; 646: 1021–1029.**

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Photo: psychologyscience.org

Photo: greatergood.berkley.edu
Activity and Suicide Risk

• Causation tricky, but...
  – 13/21 studies in adults, 7/14 adolescents, and 2/3 in older adults found an association
  – N=>80,000
  – Odds ratio 0.91 if they met guidelines


Food & Drink and Suicide Risk

• Tryptophan intake in the diet correlates with suicide rates in developed countries
  – Not influenced by
    • National happiness indicators
    • Alcohol consumption
    • Relative national wealth


Sleep and Suicide Risk

• Every hour of sleep decreased adolescent suicide risk by 11% up to 9 hours
• CBT-I lowers suicide risk (even beyond because it helps sleep)
• Nightmares are an independent suicide risk factor, along with insomnia
• Direct and indirect effects

**Professional Care: Interventions**

- Most promising in the literature so far
  - Dialectical Behavioral Therapy
  - Cognitive Therapy
  - Collaborative Assessment and Management of Suicidality (CAMS)
    - Reduces SI and overall distress more efficiently than treatment as usual
      - Large clinic with multiple complex patients
      - Checked at 6 and 12 months out

**CAMS in a Nutshell:**
- Typically for people with current suicidal thoughts/behaviors
- Semistructured framework
- Humanism, empathy, patient-centeredness
- Patient and therapist collaboratively find drivers and greater understanding of what increases risk
- Use Suicide Status Form as a tracking tool

**Community: Suicide Resources**

National Suicide Prevention Lifeline & Veterans Crisis Line: 1-800-273-8255, Press 1

- Veterans Crisis Line
  - [www.veteranscrisisline.net](http://www.veteranscrisisline.net)
- Suicide Prevention Lifeline
  - [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)
- Spread the Word:
  - [http://spreadtheword.veteranscrisisline.net/](http://spreadtheword.veteranscrisisline.net/)
- VA Office of Suicide Prevention
  - [https://www.mentalhealth.va.gov/suicide_prevention/](https://www.mentalhealth.va.gov/suicide_prevention/)

**Bringing it all together**

- Focus on MAP and values
- Build strong therapeutic relationships
- Draw in Self- and Professional Care
- Help with cognition
- Treat mood disorders
- Address substance misuse
- Address past and current trauma
- Mitigate risk factors, enhance protective ones
- Treat the whole person
"... Our job in medicine...

We've been wrong about what our job is in medicine. We think our job is to ensure health and survival. But really, it is larger than that. It is to enable well-being. And well-being is about the reasons one wishes to be alive. Those reasons matter not just at the end of life, or when disability comes, but all along the way.

-Atul Gawande, MD
Being Mortal

How do we address prevent
manage heal from suicide?

Thank You!
Whole Health for Mental Health
Day 2 Afternoon

20. Finding Vitality and Wholeness II: Meaning and Purpose

Aspects of Mental Health

• Thinking and Cognition
• Emotions
• Behaviors and Choices
• Peace and Ease
• Vitality and Wholeness

"The purpose of life is not to be happy. It is to be useful, to be honorable, to be compassionate, to have it make some difference that you have lived and lived well."

- Ralph Waldo Emerson

Vitality and Wholeness

Today, we will talk about:
• Research on Meaning and Purpose
• Resilience
• Whole Health and Suicide
Ask the Internet: *Vitality and Fully Alive*

Vitality and Wholeness: How the Internet Defines It

Image: yukokusamurai.com

Image: hosparushealth.org

Consider for a moment...

**Who is the most whole and vital person you have ever encountered?**

**Why?**
- Vivacious
- Fun to be around
- Giving
- Has purpose
- Healthy
- Cares deeply

**Who?**
- Friend
- Colleague
- Family member
- Veteran
- A role model?

Image: ppond5.com

Image: flickr.com

Image: ifsp.org

Discuss With a Partner

- What made you think of that person?
- Give an example something they did that inspired you
- How did they do with the different areas of Whole Health?
Meaning
There is nothing in the world, I venture to say, that so effectively helps one to survive even the worst conditions as the knowledge that there is a meaning in one’s life.
(Victor Frankl, Man’s Search for Meaning)

Meaning in Life: Definition
“Enhanced sense of value and importance of one’s life, coupled with a more acute awareness of life’s fragility and preciousness...One of the key elements...is a clarification of the values and goals that imbue one’s life with a sense of meaning and purpose...”

Meaning in Life and Physiology
- 42 women
- HIV+ and recent bereavement
- Tried therapeutic disclosure (journaling) for a month
- More natural killer cell cytotoxicity IF they reported an increase in meaning-related goals
- The journaling mattered less than the change in goals
Meaning and Overall Health

- 2017 review and meta-analysis
- 66 studies, n=73,546
- Positive effect of “Meaning in Life” found in all 66 of them
  - Multiple aspects of health
  - Overall effect size 0.26 (small-to-moderate)
  - 0.1 for mortality, 0.34 cancer

Purpose in Life: Definitions

- “Goals, intentions, and a sense of direction, all of which contribute to a feeling that life is meaningful”
- Desire to make a difference in the world
- May be some differences based on what exactly that purpose is
  - E.g., less youth substance abuse if PIL is goes beyond self-promoting
  - Personal fame and fortune as purpose less beneficial than moral/spiritual aims
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**Purpose in Life and Life Span**

- 7,108 American adults followed for 15 years
- Self-rated on three statements:
  1. I don’t wander through life
  2. I think about the future
  3. I feel there is still more to do in life
- Regardless of age, relationship status, depression or other factors...
- ...There was a survival benefit (hazard ratio 0.85) for people who felt they had purpose


**Purpose in Life and Brain Function**

- Tied to onset of cognitive impairment
  - N=951, followed 7 years
  - Alzheimer’s and MCI progressed less (HR’s of 0.48 and 0.65)


**Purpose in Life and Mental Health**

- “A substantial and consistent relationship” (Zika)
- Decreased suicidal ideation in older adults (n=109)
- Reduced incidence of sleep disturbance
- Reduced measures of allostatic load 10 years later
  - Even controlling for other measures
  - Predicts locus of control too
- Less impulsivity
- Better prevention of relapse in SUD (cocaine and alcohol)
- Lower health anxiety, higher resistance to stress

Zika, J Psychosom Res, 1992;83:135‐45.
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**Purpose and Other Health Outcomes**

- Reduced stroke incidence
  - 6,793 people >50
  - OR = 0.78
- Fewer MI's
  - 1,546 people with CAD
  - OR = 0.73
- More use of preventive services
  - Lipids, mammograms, prostate exams, Pap smears, colonoscopy


**And...Meaning and Purpose Save $**

- There was a dose response relationship in older adults (n=15,680) with:
  - Fewer admissions
  - Fewer ED visits
  - Lower medical expenditures overall
  - Lower drug expenditures
- The highest tertile also had a 19% increase in adherence to chronic care rec's

Munshi et al, Pop Health Manage, 2016;23(2):139-47.

**Meaning and Purpose and Genetics**

- Conserved Transcriptional Response to Adversity (CTRA) group of genes
  - More active = inflammation
  - More active = poor immune function
  - Inactivated by meditation, yoga, tai chi, and CBT for stress
- Cole et al found that high PIL scores inactivated these genes
  - More than loneliness activated them

A Small Group Activity: Contributors to Vitality

- You will have 3 minutes
- Using tape at your table, create a *life sized* outline of a person on your table. Be creative!
- List as many things as you can that help boost *your* vitality on post-its
  - Just 1 thing per post-it
- Put them in the outlined person
- Cluster similar ones

---

Time to be Appreciative: Contributors to Vitality

- Walk around the room
- Check out other groups’ bodies (the tape ones only – No HR violations!)
- Note any favorites
- After a few minutes, we’ll signal you to return to your group
- Discuss what you observed

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21. Questions & Answers
22. Implementation Part III: The Next Level

Your Team & Planning (Page XX)

• Divide into groups
  – Either TEAMS or...
  – People from DIFFERENT DISCIPLINES
• Choose a spokesperson
• Brainstorm ways your team can advance Whole Health for Mental Health Care. Pick your top 1-3 ideas
• These should be REAL PLANS you will follow through with
• Jot notes on pages XX. Please eave these with our admin person on your way out so we can summarize them

Large Groups Report Out
Whole Health for Mental Health
Day 2 Afternoon

Closing

Thank You!

Please complete your course eval’s and leave them on your way out